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      (FILE 'HOME' ENTERED AT 16:33:03 ON 08 JUL 2005)

      FILE 'REGISTRY' ENTERED AT 16:33:10 ON 08 JUL 2005
L1          492 TKPPR/SQSP
L2         4890 ?PHOSPHOLIP?/CNS

      FILE 'HCAPLUS' ENTERED AT 16:33:55 ON 08 JUL 2005
L3          274 L1
L4        59589 L2
L5            QUE PHOSPHOLIPIDS+OLD,NT/CT
L6         7858 L4-5 (L) (CONJUGAT? OR LINK? OR RACT+NT/RL)
L7            2 L3 AND L6

      FILE 'HCAOLD' ENTERED AT 16:35:03 ON 08 JUL 2005

      FILE 'USPATFULL, USPAT2' ENTERED AT 16:35:22 ON 08 JUL 2005

      FILE 'HCAOLD' ENTERED AT 16:36:57 ON 08 JUL 2005
L8            0 L1 AND L2

=> b hcap
FILE 'HCAPLUS' ENTERED AT 16:37:29 ON 08 JUL 2005
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FILE COVERS 1907 - 8 Jul 2005  VOL 143 ISS 3
FILE LAST UPDATED: 7 Jul 2005  (20050707/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

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L7    ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN    2002:778699  HCAPLUS
DN    137:299916
ED    Entered STN:  11 Oct 2002
TI    Peptide-containing compounds for targeting cells expressing NP-1 receptor
IN    Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai,
      Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder,
      Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA    USA
SO    U.S. Pat. Appl. Publ., 85 pp., Cont.-in-part of U.S. Ser. No. 585,364.
      CODEN: USXXCO
DT    Patent
LA    English
IC    ICM  A61K038-16
      ICS  A61K051-08
INCL  514008000
CC    63-6 (Pharmaceuticals)
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Search done by Noble Jarrell

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       Section cross-reference(s): 1, 8, 34
FAN.CNT 2
       PATENT NO.            KIND   DATE      APPLICATION NO.        DATE
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PI   US 2002147136          A1     20021010   US 2001-871974         20010604
PRAI US 2000-585364         A2     20000602
CLASS
  PATENT NO.         CLASS   PATENT FAMILY CLASSIFICATION CODES
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  US 2002147136      ICM     A61K038-16
                     ICS     A61K051-08
                     INCL    514008000
  US 2002147136      NCL     514/008.000; 514/021.000; 424/001.110
                     ECLA    A61K047/48R2; A61K049/00P8; A61K049/22P8; A61K049/22P4;
                             A61K049/22P16; A61K051/08Z
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OS   MARPAT 137:299916
AB   The present invention provides compds. for targeting endothelial cells,
      tumor cells or other cells that express the neuropilin-1 (NP-1) receptor,
      compns. containing the same and methods for their use. The compds. are of the
      formula A-L-B (A = a monomer, multimer or polymer of TKPPR or analog which
      specifically binds to NP-1 or cells expressing NP-1 with avidity equal or
      greater than TKPPR; L = a lipid or a non-lipid (e.g., polymer) linker; B =
      a substrate). Addnl., the present invention includes diagnostic,
      therapeutic and radiotherapeutic compns. useful for visualization, therapy
      or radiotherapy. For example, DPPE-glutaroyl-Gly-Thr-Lys-Pro-Pro-Arg-OH
      (DPPE-Glu-GTKPPR) was prepared and formulated into gas-filled microbubble
      compns. for ultrasonic echog. The bubbles bind to human aortic
      endothelial cells (HAEC) under flow. The number of bubbles bound may
      increase with time for several minutes at a given flow rate, up to a flow
      rate producing 1.53 dynes/cm2, while bubbles without the targeting moiety
      (DPPE-Glu-GTKPPR) may not bind. However, once bound under a lesser flow
      rate (e.g., 1.53 dynes/cm2), the shear stress on bubbles containing
      DPPE-Glu-GTKPPR may be increased to 6.1 dynes/cm2 without dislodging many
      of the bound bubbles.
ST   peptide neuropilin receptor endothelium tumor targeting; antitumor
      angiogenesis inhibitor peptide deriv prepn; gene therapy radiotherapy
      peptide deriv; ultrasound imaging endothelium neuropilin peptide
IT   Fusion proteins (chimeric proteins)
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (KDR/Fc, binding to human aortic endothelial cells inhibition by;
         preparation of peptide-containing compds. and compns. for targeting cells
         expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   Receptors
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (NP-1 (neuropilin-1); preparation of peptide-containing compds. and compns. for
         targeting cells expressing neuropilin-1 receptor for diagnosis,
         imaging, and therapy)
IT   Imaging agents
         (acoustic imaging contrast agents; preparation of peptide-containing compds. and
         compns. for targeting cells expressing neuropilin-1 receptor for
         diagnosis, imaging, and therapy)
IT   Imaging
      Imaging agents
         (acoustic; preparation of peptide-containing compds. and compns. for targeting
         cells expressing neuropilin-1 receptor for diagnosis, imaging, and
         therapy)
IT   Artery
         (aorta, endothelium, binding to; preparation of peptide-containing compds. and
         compns. for targeting cells expressing neuropilin-1 receptor for
         diagnosis, imaging, and therapy)
IT   Endothelium
         (aortic, binding to; preparation of peptide-containing compds. and compns. for
         targeting cells expressing neuropilin-1 receptor for diagnosis,
         imaging, and therapy)
IT   Drug delivery systems
         (beads; preparation of peptide-containing compds. and compns. for targeting

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cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   Diagnosis
Diagnosis
(cancer; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   Nucleic acids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(delivery of; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   Angiogenesis
(detection; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   Blood vessel
(endothelium; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(human aortic endothelial cells activated by; preparation of peptide-containing
compds. and compns. for targeting cells expressing neuropilin-1
receptor for diagnosis, imaging, and therapy)
IT   Drug delivery systems
(kits; preparation of peptide-containing compds. and compns. for targeting cells
expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   Drug delivery systems
(liposomes; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   Fluorescent substances
(markers; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   Radionuclides, biological studies
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(markers; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   Air
(microbubbles containing; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   Alkenes, biological studies
Alkynes
Hydrocarbons, biological studies
Perfluorocarbons
Perfluorocarbons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microbubbles containing; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   Drug delivery systems
(microbubbles; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   Drug delivery systems
(microparticles; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   Drug delivery systems
(microspheres, fluorescent, peptide-conjugated; preparation of
peptide-containing compds. and compns. for targeting cells expressing

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neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT Peptides, preparation
    RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
    (Reactant or reagent)
        (oligopeptides; preparation of peptide-containing compds. and compns. for
        targeting cells expressing neuropilin-1 receptor for diagnosis,
        imaging, and therapy)
IT Virus
        (particles; preparation of peptide-containing compds. and compns. for targeting
        cells expressing neuropilin-1 receptor for diagnosis, imaging, and
        therapy)
IT Angiogenesis inhibitors
    Drug delivery systems
    Drug screening
    Gene therapy
    Genetic vectors
    Human
    Imaging
    Imaging agents
    Radiopharmaceuticals
    Radiotherapy
    Reducing agents
    Sound and Ultrasound
    Viral vectors
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT **Phospholipids, reactions**
    Polymers, reactions
    RL: **RCT (Reactant); RACT (Reactant or reagent)**
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT Drug delivery systems
        (suspensions, gas-filled microbubbles containing; preparation of peptide-containing
        compds. and compns. for targeting cells expressing neuropilin-1
        receptor for diagnosis, imaging, and therapy)
IT Vascular endothelial growth factor receptors
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (type VEGFR-2, activated, inhibition of; preparation of peptide-containing
        compds. and compns. for targeting cells expressing neuropilin-1
        receptor for diagnosis, imaging, and therapy)
IT Endothelium
        (vascular; preparation of peptide-containing compds. and compns. for targeting
        cells expressing neuropilin-1 receptor for diagnosis, imaging, and
        therapy)
IT 9063-57-4, Tuftsin   127464-60-2, Vascular endothelial growth factor
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (binding to human aortic endothelial cells inhibition by; preparation of
        peptide-containing compds. and compns. for targeting cells expressing
        neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT 14133-76-7DP, Technetium 99, complexes with tetrapeptide conjugate,
    biological studies **470463-90-2DP, technetium 99 complexes**
    RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic
    use); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (metastable; preparation of peptide-containing compds. and compns. for targeting
        cells expressing neuropilin-1 receptor for diagnosis, imaging, and
        therapy)
IT 124-38-9, Carbon dioxide, biological studies   2551-62-4, Sulfur
    hexafluoride   7439-90-9, Krypton, biological studies   7440-37-1, Argon,
    biological studies   7440-63-3, Xenon, biological studies   7727-37-9,
    Nitrogen, biological studies   7782-44-7, Oxygen, biological studies
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (microbubbles containing; preparation of peptide-containing compds. and compns. for
        targeting cells expressing neuropilin-1 receptor for diagnosis,
        imaging, and therapy)
IT 214210-47-6, Neuropilin-1
    RL: BSU (Biological study, unclassified); BIOL (Biological study)

        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   377087-52-0P, BRU 305
     RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic
     preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant
     or reagent)
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   377087-53-1P, BRU 306
     RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);
     BIOL (Biological study); PREP (Preparation)
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   377087-63-3P, BRU 317 377087-82-6P, BRU 239
     377088-92-1P, BRU 337 377088-93-2P, BRU 346
     377725-24-1P, BRU 326 468726-69-4P 468729-71-7P
     470463-86-6P, BRU 292 470463-90-2P, BRU 363
     RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic
     use); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   100-46-9, Benzylamine, reactions 1155-64-2   1663-39-4, tert-Butyl
     acrylate   4530-20-5, Boc-glycine 5681-36-7,
     Dipalmitoylphosphatidylethanolamine   7672-27-7   15401-08-8   29022-11-5,
     Fmoc-glycine   33662-26-9   71989-26-9   71989-35-0   82911-69-1
     106392-12-5, Poloxamer F 108   120791-76-6   129223-22-9   166108-71-0
     167393-62-6   169543-81-1   198139-51-4   251450-64-3   283176-26-1
     377087-81-5D, resin bound 377087-83-7D, resin-bound
     470444-40-7, BRU 351
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   4246-51-9P, 4,7,10-Trioxa-1,13-tridecanediamine   128988-04-5P
     150525-42-1P 377087-49-5P 377087-50-8P   377087-57-5P
     377087-58-6P   377087-59-7P 377087-60-0P 377087-62-2P
     377087-64-4P   377087-65-5P   377087-66-6P   377087-67-7P   377087-69-9P
     377087-70-2P   377087-71-3P   377087-72-4P   377087-73-5P   377087-74-6P
     377087-76-8P   377087-77-9P 377087-78-0P 377087-79-1P
     377087-80-4P   377088-94-3P   468726-65-0P   468726-66-1P
     468726-68-3P 468726-70-7P 468726-71-8P
     468726-73-0P   468726-75-2DP, resin bound   468726-77-4DP,
     resin-bound   468729-73-9P   468729-75-1P   468729-78-4P   470463-87-7P
     470463-88-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   41961-58-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent);
     USES (Uses)
        (preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   10098-91-6, Yttrium 90, biological studies   13967-64-1, Dysprosium 165,
     biological studies   13967-65-2, Holmium 166, biological studies
     13968-53-1, Ruthenium 103, biological studies   13981-25-4, Copper 64,
     biological studies   13982-36-0, Yttrium 88, biological studies
     14119-09-6, Gallium 67, biological studies   14265-75-9, Lutetium 177,
     biological studies   14378-26-8, Rhenium 188, biological studies
     14913-89-4, biological studies   14998-63-1, Rhenium 186, biological
     studies   15750-15-9, Indium 111, biological studies   15757-14-9, Gallium
     68, biological studies   15758-35-7, Ruthenium 97, biological studies
     15766-00-4, Samarium 153, biological studies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (preparation of radiolabeled peptide-containing compds. and compns. for
        targeting cells expressing neuropilin-1 receptor for diagnosis,

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              imaging, and therapy)
IT    42074-68-0    468726-76-3
      RL: RCT (Reactant); RACT (Reactant or reagent)
         (resin-bound; preparation of peptide-containing compds. and compns. for
         targeting cells expressing neuropilin-1 receptor for diagnosis,
         imaging, and therapy)
IT    470463-90-2DP, technetium 99 complexes
      RL: RCT (Reactant); RACT (Reactant or reagent); THU
      (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
      (Uses)
         (metastable; preparation of peptide-containing compds. and compns. for targeting
         cells expressing neuropilin-1 receptor for diagnosis, imaging, and
         therapy)
RN    470463-90-2  HCAPLUS
CN    L-Arginine, N-[10,18-bis(hydroxyimino)-11,11,17,17-tetramethyl-1,6-dioxo-
      15-oxa-7,12,16-triazanonadec-1-yl]glycyl-N-(2-carboxyethyl)-β-
      alanylglycyl-N-[3-[[2-[2-(carboxymethoxy)ethoxy]ethyl]amino]-3-oxopropyl]-
      β-alanyl[2-(2-aminoethoxy)ethoxy]acetyl-L-threonyl-L-lysyl-L-prolyl-L-
      prolyl-, (2→1')-amide with glycyl-N-[3-[[2-[2-
      (carboxymethoxy)ethoxy]ethyl]amino]-3-oxopropyl]-β-alanyl[2-(2-
      aminoethoxy)ethoxy]acetyl-L-threonyl-L-lysyl-L-prolyl-L-prolyl-L-arginine
      (2'→1'')-amide with L-threonyl-L-lysyl-L-prolyl-L-prolyl-L-
      arginine, (4→1''')-amide with L-threonyl-L-lysyl-L-prolyl-L-prolyl-
      L-arginine (9CI)  (CA INDEX NAME)
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*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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L7    ANSWER 2 OF 2  HCAPLUS   COPYRIGHT 2005 ACS on STN
AN    2001:885834  HCAPLUS
DN    136:25104
ED    Entered STN:  07 Dec 2001
TI    Peptide-containing compounds for targeting endothelial cells, compositions
      containing the same and methods for their use
IN    Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai,
      Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder,
      Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA    Bracco Research USA, USA
SO    PCT Int. Appl., 146 pp.
      CODEN: PIXXD2
DT    Patent
LA    English
IC    ICM  A61K051-00
CC    63-6 (Pharmaceuticals)
      Section cross-reference(s): 1, 8, 9, 34, 35
FAN.CNT 2
      PATENT NO.            KIND    DATE        APPLICATION NO.        DATE
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PI    WO 2001091805         A2      20011206    WO 2001-US18053        20010604
      WO 2001091805         A3      20020906
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
             RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
             VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
      CA 2410887            AA      20011206    CA 2001-2410887        20010604
      EP 1289565            A2      20030312    EP 2001-944270         20010604
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
      JP 2004500854         T2      20040115    JP 2001-587817         20010604
PRAI  US 2000-585364        A2      20000602
      WO 2001-US18053       W       20010604
CLASS
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PATENT NO.        CLASS   PATENT FAMILY CLASSIFICATION CODES
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WO 2001091805     ICM     A61K051-00
WO 2001091805     ECLA    A61K047/48R2; A61K049/00P8; A61K049/22P4; A61K049/22P8;
                          A61K049/22P16; A61K051/08Z
JP 2004500854     FTERM   4B024/AA01; 4B024/AA20; 4B024/CA02; 4B024/DA02;
                          4B024/DA03; 4B024/GA11; 4B024/HA17; 4B063/QA05;
                          4B063/QQ21; 4B063/QQ41; 4B063/QQ61; 4B063/QQ89;
                          4B063/QQ91; 4B063/QR51; 4B063/QR59; 4B063/QR77;
                          4B063/QS31; 4B063/QS36; 4B063/QS39; 4B063/QX01;
                          4B063/QX10; 4B065/AA90X; 4B065/AA93X; 4B065/AB01;
                          4B065/AB10; 4B065/AC14; 4B065/BA02; 4B065/BA30;
                          4B065/CA24; 4B065/CA43; 4B065/CA44; 4B065/CA46;
                          4C076/CC27; 4C076/DD41; 4C076/DD44; 4C076/DD45;
                          4C076/DD46; 4C076/DD51; 4C076/DD52; 4C076/DD59;
                          4C076/DD63; 4C076/DD68; 4C076/DD69; 4C076/DD70;
                          4C076/EE06; 4C076/EE30; 4C076/EE59; 4C084/AA02;
                          4C084/AA12; 4C084/BA17; 4C084/BA18; 4C084/BA42;
                          4C084/DA03; 4C084/NA14; 4C084/ZB26; 4H045/AA10;
                          4H045/AA20; 4H045/BA13; 4H045/BA50; 4H045/BA55;
                          4H045/EA20; 4H045/EA50; 4H045/FA31; 4H045/FA41;
                          4H045/FA50; 4H045/FA58
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OS   MARPAT 136:25104
AB   The present invention provides compds. for targeting endothelial cells,
      tumor cells or other cells that express the neuropilin-1 (NP-1) receptor,
      compns. containing the same and methods for their use. The compds. are of the
      formula A-L-B (A = TKPPR or analog which specifically binds to an
      endothelial cell or cells that express markers in common with endothelial
      cells, with equal or greater avidity as TKPPR; L = a lipid or a non-lipid
      (polymer) linker; B = a substrate). Addnl., the present invention
      includes diagnostic, therapeutic and radiotherapeutic compns. useful for
      visualization, therapy or radiotherapy. For example, DPPE-glutaroyl-Gly-
      Thr-Lys-Pro-Pro-Arg-OH (DPPE-Glu-GTKPPR) was prepared and formulated into
      gas-filled microbubble compns. for ultrasonic echog. The bubbles interact
      with a VEGF receptor on human aortic endothelial cells (HAEC), possibly
      with KDR receptor, or more likely with NP-1 receptor which binds to KDR.
ST   peptide neuropilin receptor endothelium targeting diagnosis therapy;
      antitumor angiogenesis inhibitor peptide deriv prepn; gene therapy
      radiotherapy peptide deriv; ultrasound imaging endothelium neuropilin
      peptide
IT   Imaging agents
          (acoustic imaging contrast agents; preparation of peptide-containing compds. and
          compns. for targeting endothelial cells expressing neuropilin-1
          receptor for diagnosis and therapy)
IT   Imaging
          (acoustic; preparation of peptide-containing compds. and compns. for targeting
          endothelial cells expressing neuropilin-1 receptor for diagnosis and
          therapy)
IT   Artery
          (aorta, endothelium; preparation of peptide-containing compds. and compns. for
          targeting endothelial cells expressing neuropilin-1 receptor .for
          diagnosis and therapy)
IT   Endothelium
          (aortic; preparation of peptide-containing compds. and compns. for targeting
          endothelial cells expressing neuropilin-1 receptor for diagnosis and
          therapy)
IT   Drug delivery systems
          (beads; preparation of peptide-containing compds. and compns. for targeting
          endothelial cells expressing neuropilin-1 receptor for diagnosis and
          therapy)
IT   Diagnosis
      Diagnosis
          (cancer; preparation of peptide-containing compds. and compns. for targeting
          endothelial cells expressing neuropilin-1 receptor for diagnosis and
          therapy)
IT   Antitumor agents

        (carcinoma, epidermoid; preparation of peptide-containing compds. and compns.
        for targeting endothelial cells expressing neuropilin-1 receptor for
        diagnosis and therapy)

IT   Polyoxyalkylenes, biological studies
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (derivs.; preparation of peptide-containing compds. and compns. for targeting
        endothelial cells expressing neuropilin-1 receptor for diagnosis and
        therapy)

IT   Angiogenesis
        (detection; preparation of peptide-containing compds. and compns. for targeting
        endothelial cells expressing neuropilin-1 receptor for diagnosis and
        therapy)

IT   Diglycerides
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (digalactosyl; preparation of peptide-containing compds. and compns. for
        targeting endothelial cells expressing neuropilin-1 receptor for
        diagnosis and therapy)

IT   Cell activation
        (endothelial; preparation of peptide-containing compds. and compns. for
        targeting endothelial cells expressing neuropilin-1 receptor for
        diagnosis and therapy)

IT   Blood vessel
      Blood vessel
        (endothelium; preparation of peptide-containing compds. and compns. for
        targeting endothelial cells expressing neuropilin-1 receptor for
        diagnosis and therapy)

IT   Fatty acids, biological studies
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (esters, with lipids; preparation of peptide-containing compds. and compns. for
        targeting endothelial cells expressing neuropilin-1 receptor for
        diagnosis and therapy)

IT   Sterols
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (esters, with sugar acids; preparation of peptide-containing compds. and compns.
        for targeting endothelial cells expressing neuropilin-1 receptor for
        diagnosis and therapy)

IT   Lipids, biological studies
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (ether-linked, with fatty acids; preparation of peptide-containing compds. and
        compns. for targeting endothelial cells expressing neuropilin-1
        receptor for diagnosis and therapy)

IT   Vascular endothelial growth factor receptors
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (interaction with; preparation of peptide-containing compds. and compns. for
        targeting endothelial cells expressing neuropilin-1 receptor for
        diagnosis and therapy)

IT   Drug delivery systems
        (liposomes; preparation of peptide-containing compds. and compns. for targeting
        endothelial cells expressing neuropilin-1 receptor for diagnosis and
        therapy)

IT   Alcohols, biological studies
      RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (long-chain; preparation of peptide-containing compds. and compns. for targeting
        endothelial cells expressing neuropilin-1 receptor for diagnosis and
        therapy)

IT   Fluorescent substances
        (markers; preparation of peptide-containing compds. and compns. for targeting
        endothelial cells expressing neuropilin-1 receptor for diagnosis and
        therapy)

IT   Radionuclides, biological studies
      RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study);
      USES (Uses)
        (markers; preparation of peptide-containing compds. and compns. for targeting
        endothelial cells expressing neuropilin-1 receptor for diagnosis and
        therapy)

IT   Drug delivery systems

                (microbubbles, gas-filled; preparation of peptide-containing compds. and compns.
                for targeting endothelial cells expressing neuropilin-1 receptor for
                diagnosis and therapy)
IT   Drug delivery systems
                (microspheres; preparation of peptide-containing compds. and compns. for
                targeting endothelial cells expressing neuropilin-1 receptor for
                diagnosis and therapy)
IT   Liposomes
       Surfactants
                (nonionic; preparation of peptide-containing compds. and compns. for targeting
                endothelial cells expressing neuropilin-1 receptor for diagnosis and
                therapy)
IT   Peptides, biological studies
       RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (oligopeptides; preparation of peptide-containing compds. and compns. for
                targeting endothelial cells expressing neuropilin-1 receptor for
                diagnosis and therapy)
IT   Phosphoproteins
       RL: BSU (Biological study, unclassified); BIOL (Biological study)
                (phosphotyrosine-containing, phosphorylation; preparation of peptide-containing
                compds. and compns. for targeting endothelial cells expressing
                neuropilin-1 receptor for diagnosis and therapy)
IT   Air
       Angiogenesis inhibitors
       Animal
       Antitumor agents
       Diagnosis
       Drug delivery systems
       Drug delivery systems
       Gene therapy
       Genetic vectors
       Human
       Imaging
       Imaging agents
       Radiopharmaceuticals
       Radiotherapy
       Reducing agents
       Retroviral vectors
       Sound and Ultrasound
       Viral vectors
                (preparation of peptide-containing compds. and compns. for targeting endothelial
                cells expressing neuropilin-1 receptor for diagnosis and therapy)
IT   Alkenes, biological studies
       Alkynes
       Cardiolipins
       Ceramides
       Fatty acids, biological studies
       Glycolipids
       Glycosphingolipids
       Hydrocarbons, biological studies
       Lipids, biological studies
       Lipopolysaccharides
       Lysophospholipids
       Nucleic acids
       Perfluorocarbons
       Perfluorocarbons
       Phosphatidic acids
       Phosphatidylinositols
       Phospholipids, biological studies
       Polymers, biological studies
       Saponins
       Sphingolipids
       Sulfatides
       RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (preparation of peptide-containing compds. and compns. for targeting endothelial
                cells expressing neuropilin-1 receptor for diagnosis and therapy)

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IT   Phosphorylation, biological
          (protein, protein tyrosines; preparation of peptide-containing compds. and
          compns. for targeting endothelial cells expressing neuropilin-1
          receptor for diagnosis and therapy)
IT   Carbohydrates, biological studies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (sugar esters, with aliphatic acids; preparation of peptide-containing compds. and
          compns. for targeting endothelial cells expressing neuropilin-1
          receptor for diagnosis and therapy)
IT   Drug delivery systems
          (suspensions; preparation of peptide-containing compds. and compns. for
          targeting endothelial cells expressing neuropilin-1 receptor for
          diagnosis and therapy)
IT   Vascular endothelial growth factor receptors
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
          (type VEGFR-2, interaction with; preparation of peptide-containing compds. and
          compns. for targeting endothelial cells expressing neuropilin-1
          receptor for diagnosis and therapy)
IT   Endothelium
     Endothelium
          (vascular; preparation of peptide-containing compds. and compns. for targeting
          endothelial cells expressing neuropilin-1 receptor for diagnosis and
          therapy)
IT   127464-60-2, Vascular endothelial growth factor
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
          (binding to neuropilin-1 and KDR receptors; preparation of peptide-containing
          compds. and compns. for targeting endothelial cells expressing
          neuropilin-1 receptor for diagnosis and therapy)
IT   14133-76-7DP, Technetium 99, complexes with tetrapeptide conjugate,
     biological studies
     RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic
     use); BIOL (Biological study); PREP (Preparation); USES (Uses)
          (metastable; preparation of peptide-containing compds. and compns. for targeting
          endothelial cells expressing neuropilin-1 receptor for diagnosis and
          therapy)
IT   56-12-2, γ-Aminobutyric acid, biological studies   56-40-6, Glycine,
     biological studies   56-84-8, L-Aspartic acid, biological studies
     56-86-0, L-Glutamic acid, biological studies   1197-18-8,
     trans-4-Aminomethylcyclohexanecarboxylic acid   9063-57-4, Tuftsin
     214210-47-6, Neuropilin-1
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
          (preparation of peptide-containing compds. and compns. for targeting endothelial
          cells expressing neuropilin-1 receptor for diagnosis and therapy)
IT   41961-58-4DP, conjugates with red fluorescent carboxylate-modified
     FluoSphere   145018-54-8DP, FluoSphere, red fluorescent
     carboxylate-modified, conjugates with peptide
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
     PREP (Preparation); USES (Uses)
          (preparation of peptide-containing compds. and compns. for targeting endothelial
          cells expressing neuropilin-1 receptor for diagnosis and therapy)
IT   41961-58-4P
     RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic
     preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant
     or reagent)
          (preparation of peptide-containing compds. and compns. for targeting endothelial
          cells expressing neuropilin-1 receptor for diagnosis and therapy)
IT   377087-37-1P 377087-53-1P 377087-54-2P
     377087-63-3P 377087-82-6P 377088-92-1P
     377088-93-2P 377725-24-1P 377725-30-3P
     RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic
     use); BIOL (Biological study); PREP (Preparation); USES (Uses)
          (preparation of peptide-containing compds. and compns. for targeting endothelial
          cells expressing neuropilin-1 receptor for diagnosis and therapy)
IT   56-87-1, L-Lysine, reactions   72-19-5, L-Threonine, reactions   108-55-4,
     Glutaric anhydride   1155-64-2   1663-39-4, tert-Butyl acrylate

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    2149-70-4    4530-20-5    7672-27-7    15260-10-3    15401-08-8    15401-08-8
    29022-11-5    71989-26-9    71989-35-0    129223-22-9    135821-02-2
    166108-71-0    167393-62-6    169543-81-1    195136-58-4    377087-58-6
    377087-61-1    377087-81-5    377087-84-8
```
RL: RCT (Reactant); RACT (Reactant or reagent)
    (preparation of peptide-containing compds. and compns. for targeting endothelial
    cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT   128988-04-5P   198139-51-4P   377087-43-9P   377087-44-0P
     377087-45-1P   377087-46-2P   377087-47-3P 377087-48-4P
     377087-49-5P 377087-50-8P 377087-51-9P
     377087-52-0P 377087-55-3P 377087-56-4P
     377087-57-5P   377087-59-7P 377087-60-0P 377087-62-2P
     377087-64-4P   377087-65-5P   377087-66-6P   377087-67-7P   377087-68-8P
     377087-69-9P   377087-70-2P   377087-71-3P   377087-72-4P   377087-73-5P
     377087-74-6P 377087-75-7P   377087-76-8P   377087-77-9P
     377087-78-0P 377087-79-1P 377087-80-4P
     377088-94-3P   377725-26-3P   377725-28-5P   377725-29-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
    (preparation of peptide-containing compds. and compns. for targeting endothelial
    cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT   2462-63-7 5681-36-7, Dipalmitoylphosphatidylethanolamine
     106392-12-5, Ethylene oxide-propylene oxide block copolymer
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological
study); RACT (Reactant or reagent); USES (Uses)
    (preparation of peptide-containing compds. and compns. for targeting endothelial
    cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT   56-81-5, Glycerol, biological studies   56-81-5D, Glycerol, esters
     57-88-5, Cholesterol, biological studies   110-15-6, Succinic acid,
     biological studies   110-94-1, Glutaric acid   124-30-1, Stearylamine
     124-38-9, Carbon dioxide, biological studies   141-82-2, Malonic acid,
     biological studies   144-62-7, Oxalic acid, biological studies   538-24-9,
     Glycerol trilaurate   1256-86-6, Cholesterol sulfate   1510-21-0,
     Cholesterol hemisuccinate   2197-63-9, Dicetyl phosphate   2551-62-4,
     Sulfur hexafluoride   3614-36-6, Diacetyl phosphate   4345-03-3
     4537-76-2, Distearoylphosphatidylethanolamine   7439-90-9, Krypton,
     biological studies   7440-37-1, Argon, biological studies   7440-63-3,
     Xenon, biological studies   7727-37-9, Nitrogen, biological studies
     7782-44-7, Oxygen, biological studies   9002-89-5, Polyvinyl alcohol
     9004-54-0D, Dextran, derivs.   10098-91-6, Yttrium-90, biological studies
     13967-64-1, Dysprosium-165, biological studies   13967-65-2, Holmium-166,
     biological studies   13968-53-1, Ruthenium-103, biological studies
     13981-25-4, Copper-64, biological studies   13982-36-0, Yttrium-88,
     biological studies   14119-09-6, Gallium-67, biological studies
     14133-76-7, Technetium-99, biological studies   14265-75-9, Lutetium-177,
     biological studies   14378-26-8, Rhenium-188, biological studies
     14913-89-4, biological studies   14998-63-1, Rhenium-186, biological
     studies   15750-15-9, Indium-111, biological studies   15757-14-9,
     Gallium-68, biological studies   15758-35-7, Ruthenium-97, biological
     studies   15766-00-4, Samarium-153, biological studies   20255-95-2,
     Dimyristoylphosphatidylethanolamine   24529-88-2   25322-68-3D,
     Polyethylene glycol, derivs.   26657-95-4, Glycerol dipalmitate
     27638-00-2, Glycerol dilaurate   55252-82-9   68354-92-7   73294-85-6
     76822-97-4   78543-25-6, 1-Hexadecyl-2-palmitoylglycerophosphoethanolamine
     83554-62-5   87136-19-4   108032-13-9   161293-59-0   161441-83-4
     186198-32-3   377088-91-0
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
    (preparation of peptide-containing compds. and compns. for targeting endothelial
    cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT   4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 377087-83-7
RL: RCT (Reactant); RACT (Reactant or reagent)
    (support-bound; preparation of peptide-containing compds. and compns. for
    targeting endothelial cells expressing neuropilin-1 receptor for
    diagnosis and therapy)

IT   41961-58-4DP, conjugates with red fluorescent carboxylate-modified
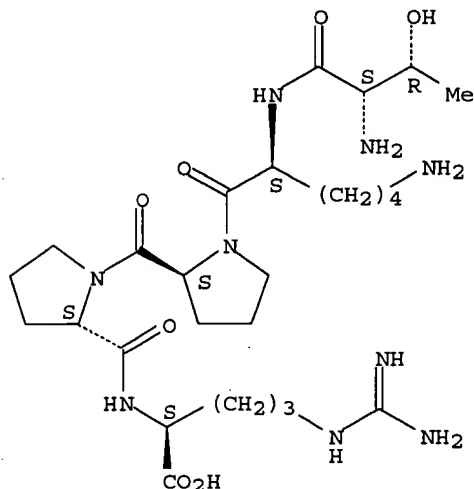   FluoSphere

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RL: **RCT (Reactant)**; DGN (Diagnostic use); SPN (Synthetic
    preparation); **RACT (Reactant or reagent)**; BIOL (Biological
    study); PREP (Preparation); USES (Uses)
        (preparation of peptide-containing compds. and compns. for targeting endothelial
        cells expressing neuropilin-1 receptor for diagnosis and therapy)
RN   41961-58-4   HCAPLUS
CN   L-Arginine, L-threonyl-L-lysyl-L-prolyl-L-prolyl- (9CI)   (CA INDEX NAME)

Absolute stereochemistry.

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FILE 'HOME' ENTERED AT 16:37:50 ON 08 JUL 2005

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    (FILE 'HOME' ENTERED AT 15:07:55 ON 08 JUL 2005)

    FILE 'HCAPLUS' ENTERED AT 15:07:59 ON 08 JUL 2005
L1          1 US2002147136/PN

    FILE 'REGISTRY' ENTERED AT 15:08:35 ON 08 JUL 2005

    FILE 'HCAPLUS' ENTERED AT 15:08:41 ON 08 JUL 2005
L2          TRA L1 1- RN :       103 TERMS

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L3         103 SEA L2

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L4          1 US2002147136/PN

=> b hcap
FILE 'HCAPLUS' ENTERED AT 15:09:11 ON 08 JUL 2005
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FILE LAST UPDATED: 7 Jul 2005 (20050707/ED)

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L1    ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN    2002:778699  HCAPLUS
DN    137:299916
ED    Entered STN:  11 Oct 2002
TI    Peptide-containing compounds for targeting cells expressing NP-1 receptor
IN    Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai,
      Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder,
      Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA    USA
SO    U.S. Pat. Appl. Publ., 85 pp., Cont.-in-part of U.S. Ser. No. 585,364.
      CODEN: USXXCO
DT    Patent
LA    English
IC    ICM  A61K038-16
      ICS  A61K051-08
INCL 514008000
CC.  63-6 (Pharmaceuticals)
      Section cross-reference(s): 1, 8, 34
FAN.CNT 2
      PATENT NO.          KIND  DATE      APPLICATION NO.        DATE
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PI   US 2002147136      A1    20021010   US 2001-871974         20010604 <--
PRAI US 2000-585364     A2    20000602
CLASS
  PATENT NO.           CLASS   PATENT FAMILY CLASSIFICATION CODES
  --------------       -----   ---------------------------------------------------
  US 2002147136        ICM     A61K038-16
                       ICS     A61K051-08
                       INCL    514008000
  US 2002147136        NCL     514/008.000; 514/021.000; 424/001.110
                       ECLA    A61K047/48R2; A61K049/00P8; A61K049/22P8; A61K049/22P4;
                               A61K049/22P16; A61K051/08Z                       <--
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OS   MARPAT 137:299916
AB   The present invention provides compds. for targeting endothelial cells,
     tumor cells or other cells that express the neuropilin-1 (NP-1) receptor,
     compns. containing the same and methods for their use. The compds. are of the
     formula A-L-B (A = a monomer, multimer or polymer of TKPPR or analog which
     specifically binds to NP-1 or cells expressing NP-1 with avidity equal or
     greater than TKPPR; L = a lipid or a non-lipid (e.g., polymer) linker; B =
     a substrate). Addnl., the present invention includes diagnostic,
     therapeutic and radiotherapeutic compns. useful for visualization, therapy
     or radiotherapy. For example, DPPE-glutaroyl-Gly-Thr-Lys-Pro-Pro-Arg-OH
     (DPPE-Glu-GTKPPR) was prepared and formulated into gas-filled microbubble
     compns. for ultrasonic echog. The bubbles bind to human aortic
     endothelial cells (HAEC) under flow. The number of bubbles bound may
     increase with time for several minutes at a given flow rate, up to a flow
     rate producing 1.53 dynes/cm2, while bubbles without the targeting moiety
     (DPPE-Glu-GTKPPR) may not bind. However, once bound under a lesser flow
     rate (e.g., 1.53 dynes/cm2), the shear stress on bubbles containing
     DPPE-Glu-GTKPPR may be increased to 6.1 dynes/cm2 without dislodging many
     of the bound bubbles.
ST   peptide neuropilin receptor endothelium tumor targeting; antitumor
     angiogenesis inhibitor peptide deriv prepn; gene therapy radiotherapy
     peptide deriv; ultrasound imaging endothelium neuropilin peptide
IT   Fusion proteins (chimeric proteins)
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (KDR/Fc, binding to human aortic endothelial cells inhibition by;
        preparation of peptide-containing compds. and compns. for targeting cells
        expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   Receptors
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (NP-1 (neuropilin-1); preparation of peptide-containing compds. and compns. for
        targeting cells expressing neuropilin-1 receptor for diagnosis,
        imaging, and therapy)
IT   Imaging agents
        (acoustic imaging contrast agents; preparation of peptide-containing compds. and
        compns. for targeting cells expressing neuropilin-1 receptor for
        diagnosis, imaging, and therapy)
IT   Imaging
     Imaging agents
        (acoustic; preparation of peptide-containing compds. and compns. for targeting
        cells expressing neuropilin-1 receptor for diagnosis, imaging, and
        therapy)
IT   Artery
        (aorta, endothelium, binding to; preparation of peptide-containing compds. and
        compns. for targeting cells expressing neuropilin-1 receptor for
        diagnosis, imaging, and therapy)
IT   Endothelium
        (aortic, binding to; preparation of peptide-containing compds. and compns. for
        targeting cells expressing neuropilin-1 receptor for diagnosis,
        imaging, and therapy)
IT   Drug delivery systems
        (beads; preparation of peptide-containing compds. and compns. for targeting
        cells expressing neuropilin-1 receptor for diagnosis, imaging, and
        therapy)
IT   Diagnosis
     Diagnosis

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(cancer; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Nucleic acids
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (delivery of; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Angiogenesis
         (detection; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Blood vessel
         (endothelium; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Tumor necrosis factors
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (human aortic endothelial cells activated by; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Drug delivery systems
         (kits; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Drug delivery systems
         (liposomes; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Fluorescent substances
         (markers; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Radionuclides, biological studies
     RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (markers; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Air
         (microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Alkenes, biological studies
     Alkynes
     Hydrocarbons, biological studies
     Perfluorocarbons
     Perfluorocarbons
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Drug delivery systems
         (microbubbles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Drug delivery systems
         (microparticles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Drug delivery systems
         (microspheres, fluorescent, peptide-conjugated; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT   Peptides, preparation
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(oligopeptides; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   Virus
(particles; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   Angiogenesis inhibitors
Drug delivery systems
Drug screening
Gene therapy
Genetic vectors
Human
Imaging
Imaging agents
Radiopharmaceuticals
Radiotherapy
Reducing agents
Sound and Ultrasound
Viral vectors
(preparation of peptide-containing compds. and compns. for targeting cells
expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   Phospholipids, reactions
Polymers, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of peptide-containing compds. and compns. for targeting cells
expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   Drug delivery systems
(suspensions, gas-filled microbubbles containing; preparation of peptide-containing
compds. and compns. for targeting cells expressing neuropilin-1
receptor for diagnosis, imaging, and therapy)
IT   Vascular endothelial growth factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type VEGFR-2, activated, inhibition of; preparation of peptide-containing
compds. and compns. for targeting cells expressing neuropilin-1
receptor for diagnosis, imaging, and therapy)
IT   Endothelium
(vascular; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   9063-57-4, Tuftsin    127464-60-2, Vascular endothelial growth factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(binding to human aortic endothelial cells inhibition by; preparation of
peptide-containing compds. and compns. for targeting cells expressing
neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   14133-76-7DP, Technetium 99, complexes with tetrapeptide conjugate,
biological studies    470463-90-2DP, technetium 99 complexes
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(metastable; preparation of peptide-containing compds. and compns. for targeting
cells expressing neuropilin-1 receptor for diagnosis, imaging, and
therapy)
IT   124-38-9, Carbon dioxide, biological studies    2551-62-4, Sulfur
hexafluoride   7439-90-9, Krypton, biological studies    7440-37-1, Argon,
biological studies    7440-63-3, Xenon, biological studies    7727-37-9,
Nitrogen, biological studies    7782-44-7, Oxygen, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microbubbles containing; preparation of peptide-containing compds. and compns. for
targeting cells expressing neuropilin-1 receptor for diagnosis,
imaging, and therapy)
IT   214210-47-6, Neuropilin-1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of peptide-containing compds. and compns. for targeting cells
expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
IT   377087-52-0P, BRU 305
RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic

preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
    (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT    377087-53-1P, BRU 306
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
    (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT    377087-63-3P, BRU 317   377087-82-6P, BRU 239   377088-92-1P, BRU 337
377088-93-2P, BRU 346   377725-24-1P, BRU 326   468726-69-4P
468729-71-7P   470463-86-6P, BRU 292   470463-90-2P, BRU 363
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
    (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT    100-46-9, Benzylamine, reactions   1155-64-2   1663-39-4, tert-Butyl acrylate   4530-20-5, Boc-glycine   5681-36-7, Dipalmitoylphosphatidylethanolamine   7672-27-7   15401-08-8   29022-11-5, Fmoc-glycine   33662-26-9   71989-26-9   71989-35-0   82911-69-1
106392-12-5, Poloxamer F 108   120791-76-6   129223-22-9   166108-71-0
167393-62-6   169543-81-1   198139-51-4   251450-64-3   283176-26-1
377087-81-5D, resin bound   377087-83-7D, resin-bound   470444-40-7, BRU 351
RL: RCT (Reactant); RACT (Reactant or reagent)
    (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT    4246-51-9P, 4,7,10-Trioxa-1,13-tridecanediamine   128988-04-5P
150525-42-1P   377087-49-5P   377087-50-8P   377087-57-5P   377087-58-6P
377087-59-7P   377087-60-0P   377087-62-2P   377087-64-4P   377087-65-5P
377087-66-6P   377087-67-7P   377087-69-9P   377087-70-2P   377087-71-3P
377087-72-4P   377087-73-5P   377087-74-6P   377087-76-8P   377087-77-9P
377087-78-0P   377087-79-1P   377087-80-4P   377088-94-3P   468726-65-0P
468726-66-1P   468726-68-3P   468726-70-7P   468726-71-8P   468726-73-0P
468726-75-2DP, resin bound   468726-77-4DP, resin-bound   468729-73-9P
468729-75-1P   468729-78-4P   470463-87-7P   470463-88-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
    (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT    41961-58-4P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
    (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT    10098-91-6, Yttrium 90, biological studies   13967-64-1, Dysprosium 165, biological studies   13967-65-2, Holmium 166, biological studies
13968-53-1, Ruthenium 103, biological studies   13981-25-4, Copper 64, biological studies   13982-36-0, Yttrium 88, biological studies
14119-09-6, Gallium 67, biological studies   14265-75-9, Lutetium 177, biological studies   14378-26-8, Rhenium 188, biological studies
14913-89-4, biological studies   14998-63-1, Rhenium 186, biological studies   15750-15-9, Indium 111, biological studies   15757-14-9, Gallium 68, biological studies   15758-35-7, Ruthenium 97, biological studies
15766-00-4, Samarium 153, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
    (preparation of radiolabeled peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT    42074-68-0   468726-76-3
RL: RCT (Reactant); RACT (Reactant or reagent)
    (resin-bound; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

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L4   ANSWER 1 OF 1 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN   2003-800817 [75]   WPIX
CR   2002-195523 [25]
DNC C2003-221021
TI   Composition used in targeting endothelial cells e.g. tumor cells comprises
     compounds containing monomers, multimers or polymers of
     L-arginine-L-threonyl-L-lysyl-L-prolyl-L-prolyl.
DC   A96 B04 K08
IN   LINDER, K; MARINELLI, E R; NANJAPPAN, P; NUNN, A D; PILLAI, R; RAJU, N;
     RAMALINGAM, K; TWEEDLE, M F; VON WRONSKI, M A
PA   (LIND-I) LINDER K; (MARI-I) MARINELLI E R; (NANJ-I) NANJAPPAN P; (NUNN-I)
     NUNN A D; (PILL-I) PILLAI R; (RAJU-I) RAJU N; (RAMA-I) RAMALINGAM K;
     (TWEE-I) TWEEDLE M F; (VWRO-I) VON WRONSKI M A
CYC 1
PI   US 2002147136   A1 20021010 (200375)*   85   A61K038-16   <--
ADT US 2002147136 A1 CIP of US 2000-585364 20000602, US 2001-871974 20010604
PRAI US 2001-871974   20010604; US 2000-585364   20000602
IC   ICM A61K038-16
     ICS A61K051-08
AB   US2002147136 A UPAB: 20031120
     NOVELTY - Composition (A1) comprises compounds containing monomers,
     multimers or polymers of L-arginine-L-threonyl-L-lysyl-L-prolyl-L-prolyl.
         DETAILED DESCRIPTION - Composition (A1) comprises a compound
     containing monomers, multimers or polymers of L-arginine-L-threonyl-L-
     lysyl-L-prolyl-L-prolyl (TKPPR) of formula A-L-B1 (I).
         A = monomer, multimer or polymer of TKPPR or its analogue that
     specifically binds to·NP-1 or cells that express NP-1 with avidity of at
     least that of TKPPR;
         L = a linker (preferably a group of formula (i));
         X = NH, NR, O, S or SR;
     m = 0-2;
     n = 0-4;
         R = H or 1-4C alkyl (optionally substituted by at least one OH), and

B1 = a substrate.
INDEPENDENT CLAIMS are also included for:
(1) a compound of formula A-L-B1a (II) and A-L-B3 (III) for use in targeting endothelial cells, tumor cells or other cells;
(2) an ultrasound contrast agent (c1) comprising a suspension of gas filled microbubbles comprising (II);
(3) an ultrasound contrast agent (c2) comprising a suspension of gas filled microballoons comprising (III);
(4) preparation of (I) which comprises conjugating the monomer, multimer or polymer of TKPRR or its analogue with a linker to obtain a compound of formula A-L (IV), forming a covalent or non-covalent bond between (IV) and the substrate B1 or forming a covalent bond between B1 and the linker to form a conjugate B-L followed by conjugation with the monomer, and
(5) a kit for preparing a radiopharmaceutical comprising (A1).
B1a = a phospholipid group of formula (ii);
M = alkaline or alkaline earth metal cation;
R1, R2 = 12-20C linear chain optionally interrupted by CO or O, and
X2 = H, CH2CH2NH2, CH2CH(NH3+)-COO-, CH2CH(OH)CH2OH or a group of formula (iii).
ACTIVITY - Cytostatic; Antiangiogenetic.
MECHANISM OF ACTION - Vascular endothelial growth factor binding receptor transmembrane glycoprotein (NP-1) binder.
USE - Used for targeting endothelial cells, tumor cells or other cells which express NP-1, for inhibiting angiogenesis, for ultrasound imaging, staging a tumor, screening at least one targeted ultrasound contrast agent for the ability to target endothelial cells, tumor cells or other cells which express NP-1, for the therapeutic delivery in vivo of a bioactive agent and for delivering desired nucleic acids to endothelial cells, tumor cells or other cells which express NP-1 (all claimed). The composition is also useful for visualization therapy or radiotherapy of endothelial cells.
ADVANTAGE - (A1) can be used with or without a detectable moiety for any of the imaging modalities.
Dwg.0/4

FS   CPI
FA   AB; GI; DCN
MC   CPI: A12-V01; A12-V03C2; B01-D02; B03-H; B04-B01B; B04-C01A; B04-C02;
          B04-C03; B04-D01; B04-J02; B05-A03B; B05-A04; B05-B01P; B05-B02C;
          B05-C08; B10-A07; B10-B02J; B10-B04B; B10-C02; B10-H02B; B12-K04C1;
          B14-F01D; B14-H01; K08-X; K09-B; K09-E

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L4   ANSWER 1 OF 1   WPIX   COPYRIGHT 2005 THE THOMSON CORP on STN
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      M1   *38* DCN: R16461-K; R16461-T; R16461-Q; R16461-M
      M1   *39* DCN: RA0120-K; RA0120-T; RA0120-Q; RA0120-M
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      M1   *43* DCN: RA0121-K; RA0121-T; RA0121-Q; RA0121-M
      M1   *44* DCN: RA04V6-K; RA04V6-T; RA04V6-Q; RA04V6-M
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      M1   *46* DCN: RAAXLX-K; RAAXLX-T; RAAXLX-Q; RAAXLX-M
      M1   *47* DCN: 0097-34703-K; 0097-34703-T; 0097-34703-Q; 0097-34703-M;
                     0097-34703-P
      M2   *01* DCN: RA04F6-K; RA04F6-T; RA04F6-Q; RA04F6-M
      M2   *02* DCN: R06891-K; R06891-T; R06891-Q; R06891-M
      M2   *03* DCN: R07812-K; R07812-T; R07812-Q; R07812-M
      M2   *04* DCN: R09617-K; R09617-T; R09617-Q; R09617-M; R10728-K; R10728-T;
                     R10728-Q; R10728-M
      M2   *05* DCN: R01065-K; R01065-T; R01065-Q; R01065-M
      M2   *06* DCN: RA0ICL-K; RA0ICL-T; RA0ICL-Q; RA0ICL-M

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M2  *07* DCN: RA11FY-K;  RA11FY-T;  RA11FY-Q;  RA11FY-M
M2  *08* DCN: RA1AGG-K;  RA1AGG-T;  RA1AGG-Q;  RA1AGG-M
M2  *09* DCN: RA0K4Y-K;  RA0K4Y-T;  RA0K4Y-Q;  RA0K4Y-M
M2  *10* DCN: R00104-K;  R00104-T;  R00104-Q;  R00104-M;  R04091-K;  R04091-T;
              R04091-Q;  R04091-M;  R13229-K;  R13229-T;  R13229-Q;  R13229-M
M2  *11* DCN: R00116-K;  R00116-T;  R00116-Q;  R00116-M;  R04750-K;  R04750-T;
              R04750-Q;  R04750-M
M2  *12* DCN: R00114-K;  R00114-T;  R00114-Q;  R00114-M;  R04738-K;  R04738-T;
              R04738-Q;  R04738-M
M2  *13* DCN: R00100-K;  R00100-T;  R00100-Q;  R00100-M;  R17997-K;  R17997-T;
              R17997-Q;  R17997-M
M2  *14* DCN: R06639-K;  R06639-T;  R06639-Q;  R06639-M
M2  *15* DCN: R00900-K;  R00900-T;  R00900-Q;  R00900-M;  R07861-K;  R07861-T;
              R07861-Q;  R07861-M
M2  *16* DCN: R01137-K;  R01137-T;  R01137-Q;  R01137-M;  R12109-K;  R12109-T;
              R12109-Q;  R12109-M
M2  *17* DCN: R01152-K;  R01152-T;  R01152-Q;  R01152-M;  R07021-K;  R07021-T;
              R07021-Q;  R07021-M
M2  *18* DCN: R08480-K;  R08480-T;  R08480-Q;  R08480-M
M2  *19* DCN: R10312-K;  R10312-T;  R10312-Q;  R10312-M
M2  *20* DCN: R10313-K;  R10313-T;  R10313-Q;  R10313-M
M2  *21* DCN: R16329-K;  R16329-T;  R16329-Q;  R16329-M
M2  *22* DCN: R16328-K;  R16328-T;  R16328-Q;  R16328-M
M2  *23* DCN: R01738-K;  R01738-T;  R01738-Q;  R01738-M
M2  *24* DCN: R01779-K;  R01779-T;  R01779-Q;  R01779-M
M2  *25* DCN: R03186-K;  R03186-T;  R03186-Q;  R03186-M
M2  *26* DCN: R03134-K;  R03134-T;  R03134-Q;  R03134-M
M2  *27* DCN: R03133-K;  R03133-T;  R03133-Q;  R03133-M
M2  *28* DCN: RA0XPN-K;  RA0XPN-T;  RA0XPN-Q;  RA0XPN-M
M2  *29* DCN: R18066-K;  R18066-T;  R18066-Q;  R18066-M
M2  *30* DCN: RAAXL7-K;  RAAXL7-T;  RAAXL7-Q;  RAAXL7-M
M5  *33* DCN: R11954-K;  R11954-T;  R11954-Q;  R11954-M
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M5  *35* DCN: R00148-K;  R00148-T;  R00148-Q;  R00148-M
M5  *36* DCN: RAAXKP-K;  RAAXKP-T;  RAAXKP-Q;  RAAXKP-M


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